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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/700,553	11/05/2003	Ayako Uji	01272.020640.	1053
5514	7590	07/08/2005	EXAMINER	
FITZPATRICK CELLA HARPER & SCINTO 30 ROCKEFELLER PLAZA NEW YORK, NY 10112			MRUK, GEOFFREY S	
			ART UNIT	PAPER NUMBER
			2853	

DATE MAILED: 07/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/700,553

Applicant(s)

UJI ET AL.

Examiner

Geoffrey Mruk

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)¹
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 5 February 2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Bohorquez et al. (US 5,736,995).

With respect to claim 1, Bohorquez discloses an inkjet recording apparatus for performing recording by ejecting ink on to a recording medium using a plurality of recording heads (Fig. 1, printhead; Column 1, lines 55-57) which apply heat to the ink with heating means to generate bubbles in the ink and to eject the ink with the pressure of the bubbles (Column 1, lines 29-67; Column 2, lines 1-14), the apparatus comprising:

- recording mode setting means (Column 3, line 67, i.e. firing pulses) for setting a head that is to be used for recording and a head that is not to be used among the plurality of recording heads (Column 3, line 66, i.e. non-firing pulses); and
- control means (Fig. 1, element 30) for heating the recording head that is set to be not used for recording by the recording mode setting means to adjust the temperature of the recording head to be used for recording (Column 6, lines 9-35) utilizing heat conduction (Column 4, line 46).

With respect to claim 2, Bohorquez discloses the control means (Fig. 1, element 30) causes the heating means for the recording head (Fig. 1, printhead) that is not to be used for recording to generate heat such that the ink is not ejected from the recording head (Column 4, lines 1-24).

With respect to claim 3, Bohorquez discloses the control means (Fig. 1, element 30) causes heating of the recording head (Fig. 1, printhead) that is not to be used for recording while the recording head to be used for recording performs recording (Column 6, lines 9-35).

With respect to claim 4, Bohorquez discloses the plurality of recording heads (Column 1, lines 55-57) comprise substrates (Fig. 3, element 40) formed with a plurality of recording elements (Fig. 3, element 42) for ejecting the ink arranged on the same plate.

With respect to claim 5, Bohorquez discloses an inkjet recording apparatus for performing recording by ejecting ink on to a recording medium using a plurality of recording heads (Fig. 1, printhead; Column 1, lines 55-57) which apply heat to the ink with heating means to generate bubbles in the ink and to eject the ink with the pressure of the bubbles (Column 1, lines 29-67; Column 2, lines 1-14), the apparatus comprising:

- discrimination means (Fig. 1, element 28) for discriminating between a recording head that is to be used and a recording head that is not to be used for the next recording to be performed (Column 4, lines 51-59); and
- control means (Fig. 1, element 30) for heating the recording head discriminated to be not used by the discrimination means before the recording head

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discriminated to be used for recording starts a recording operation to adjust the temperature (Column 6, lines 9-35) of the recording head utilizing heat conduction (Column 4, line 46).

With respect to claim 6, Bohorquez discloses a heater for heating provided independently of the heating means is used as the control means (Column 3, lines 6-10).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Smith et al. (US 4,791,435) discloses thermal inkjet printhead temperature control where at low temperatures, low energy pulses are sent to a nozzle to heat it. These pulses are below the threshold that would cause a drop of ink to be fired.

Fuse (US 5,581,281) discloses a preparatory driving operation so that the ink-jet recording apparatus is printing within an optimum temperature range.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Geoffrey Mruk whose telephone number is (571) 272-2810. The examiner can normally be reached on 7am - 330pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

GSM
7/5/2005

GM


Stephen D. Meler
Primary Examiner